

CLAIMS

1. A method of glyrating a protein comprising the following steps:
 - combining a quantity of one of a reducing sugar and a reducing polysaccharide with the protein in a solution
 - lyophilizing the solution to produce a lyophilized sample;
 - placing said lyophilized sample under vacuum;
 - heating said lyophilized sample under vacuum.
2. A method according to claim 1 further comprising the step of reducing the glyrated protein with one of sodium borohydride and cyanoborohydride and alkyl amino borane.
3. A method according to claim 1 wherein the sample is heated at a temperature in the range of about 40°C to about 150°C.
4. A method according to claim 1 wherein the reducing sugar is heated from 1 to 48 hours.
5. A method according to claim 1 wherein the reducing sugar is selected from the group consisting of 1 to 50 sugar units.
6. A method according to claim 1 wherein the protein is lyophilized from a solution in the range of pH 2 to pH 12.
7. A method of homogeneously cross-linking a protein comprising the following steps:
 - combining a linker including at least two reducing sugars with the protein in a solution;
 - lyophilizing the solution to produce a lyophilized sample;

- placing said lyophilized sample under vacuum;
 - heating said lyophilized sample under vacuum.
8. A method according to claim 7 further comprising the step of reducing the crosslinked protein with one of sodium borohydride and cyanoborohydride alkyl amino borane.
 9. A method according to claim 1 wherein the sample is heated at a temperature in the range of about 40°C to about 150°C.
 10. A method according to claim 7 wherein the at least two reducing sugars are separated by 2 to 25 chemical linking units.
 11. A method according to claim 7 wherein the protein is lyophilized from a solution in the range of pH 2 to pH 12.
 12. A method of heterogeneously cross-linking at least two proteins comprising the following steps:
 - combining a linker including at least two reducing sugars with the at least two proteins in a solution;
 - lyophilizing the solution to produce a lyophilized sample;
 - placing said lyophilized sample under vacuum;
 - heating said lyophilized sample under vacuum.
 13. A method according to claim 12 wherein excipients are included in the lyophilization mixture
 14. A method according to claim 12 further comprising the step of reducing the crosslinked protein with one of sodium borohydride and cyanoborohydride and alkyl amino borane.

14. A method according to claim 12 wherein the sample is heated at a temperature in the range of about 40°C to about 150°C.
15. A method according to claim 12 wherein the at least two reducing sugars are separated by 2 to 50 chemical linking units.
16. A method according to claim 12 wherein at least two proteins lyophilized from a solution in the range of pH 2 to pH 12.
17. A method of heterogeneously cross-linking at least two proteins comprising the following steps:
 - combining a linker including at least two reducing sugars with a protein
 - lyophilizing the solution to produce a lyophilized sample;
 - placing said lyophilized sample under vacuum;
 - heating said lyophilized sample under vacuum.
 - isolating the glycated monomeric product
 - combining the glycated monomeric product with a protein
 - lyophilizing the solution to produce a lyophilized sample;
 - placing said lyophilized sample under vacuum; and
 - heating said lyophilized sample under vacuum.
18. A method according to claim 17 wherein excipients are included in the lyophilization mixture
19. A method according to claim 17 further comprising the step of reducing the crosslinked protein with one of sodium borohydride and cyanoborohydride and alkyl amino borane.

20. A method according to claim 17 wherein the sample is heated at a temperature in the range of about 40°C to about 150°C.
21. A method according to claim 17 wherein the at least two reducing sugars are separated by 2 to 50 chemical linking units.
22. A method according to claim 17 wherein at least two proteins lyophilized from a solution in the range of pH 2 to pH 12.